
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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LEAD IN OCTOBER 1997

Mine production, based upon the net quantity of lead recovered in the smelting of concentrate, increased by 2% in October but was essentially unchanged compared with production in October 1996. Primary refinery production increased in October to a level about 9% above that of August 1997, following the September decline that was attributed principally to the temporary closure of one refinery for routine maintenance. Secondary refinery production increased by about 1% in October and was down by about 3% compared with production in October 1996. Reported consumption increased by 1% in October.

According to *Platt's Metals Week* published quotations, the average North American producer price and London Metal Exchange (LME) cash price moved downward in October, decreasing by 0.3% and 5.4%, respectively. Prices declined even though lead supplies remained tight in the United States and inventories of LME stocks continue to be at very low levels (American Metal Market, 1997; Metal Bulletin, 1997b).

National Defense Stockpile cash disposal (sale) of lead in October, the first month of fiscal year 1998, was 3,869 metric tons (4,265 short tons). The Defense National Stockpile Center's Annual Materials Plan for fiscal year 1998 includes a maximum sales offering for lead of 54,430 metric tons (60,000 short tons).

The U.S. Environmental Protection Agency continued to solicit public comments from involved parties, regarding the agency's development of training and certification requirements and work practice standards for individuals and firms conducting lead-based paint activities in public buildings (except child-occupied facilities), commercial buildings, and steel structures. Issues of particular concern in the development of such requirements and standards were: (1) further clarification of the term "lead-based paint activities" to resolve whether maintenance activities involving incidental disturbance of lead-coated surfaces should be included; (2) determination of the interface with U.S. Occupational Safety and Health

Administration regulations in order to minimize duplication and overlap of Federal regulatory programs; (3) differentiation of the various types of buildings and structures so as to clearly define the terms "commercial" and "public" buildings in the context of manufacturing, industrial, and service-related activities; and (4) consideration of pre-existing or developing State, tribal, or local regulations governing lead-based paint activities in order to maximize the use of available regulations (U.S. Environmental Protection Agency, 1997).

Ownership of the Rosh Pinah lead-zinc mine, in southwestern Namibia, reportedly has been settled after more than 2-years of negotiations between the concerned parties. An agreement in principle was reached recently between South Africa's Iron and Steel Corp. (Isacor) and Namibia's PE Minerals. Under a memorandum of understanding, the assets of the mine (owned by Isacor subsidiary Isacor Tin), and the mineral rights (held by PE) will be transferred to a new operating company. This new company, consisting of Isacor Tin and New Mining Ventures, a sister company of PE, will each hold 50% of the equity in the new company, which has yet to be named. Despite the prolonged uncertainty over ownership of Rosh Pinah, about 70,000 tons of zinc concentrate and 28,000 tons of lead concentrate were produced in 1996. The lead concentrate was shipped to the Tsumeb smelter-refinery in northern Namibia (Mining Journal, 1997). The Tsumeb facility was closed in August 1997, in order to correct lingering technical problems, but was expected to reopen in February 1998. Production capacity at Tsumeb is currently about 30,000 tons of refined lead per year (Platt's Metals Week, 1997b).

Malaysia's Metal Reclamation Industrial Sdn. Bhd. (MRSIB) has designed a new secondary lead smelter to be built at Pulau Indah in West Port Industrial Estate near Klang. The plant will be capable of producing 75,000 tons of lead and lead alloys per year, thus enabling the country to further meet the increasing domestic demand for lead, which is currently growing at about 8% per year. At present, MRSIB produces 37,000 tons of lead

per year at its battery breaking, smelting and refining works in Taman Selayang Baru, Selangor. Malaysia has no lead mines and thus the recycling of spent lead-acid batteries is its only internal source of lead (Metal Bulletin, 1997d).

Australia's Aberfoyle Ltd. reportedly will close its Hellyer base metal mine in Tasmania by mid-year 2000. According to a company spokesperson, reserves are being depleted and, although exploration is continuing, there is no indication at this stage that mining can be extended beyond 2000. In 1996, about 1.4 million tons of ore were treated at Hellyer, yielding 140,000 tons of zinc, and 49,000 tons of lead in concentrates, as well as significant quantities of copper and silver (Metal Bulletin, 1997a).

Ivernia Lisheen Mining and Minorco Lisheen, joint-venture partners in the Lisheen zinc-lead mining project in County Tipperary, Ireland were granted a state mining lease in mid-October by Ireland's Department of Marine and Natural Resources. Receipt of the mining lease will permit more expeditious completion of financing and initiation of construction at the mine. The construction program is expected to be completed in time for production to start on schedule in mid-1999. Ivernia and Minorco each hold a 50% share in the project with Minorco acting as the operator. Reserves at Lisheen reportedly total about 19 million tons at a grade of 12.75% zinc and 2.2% lead (Metal Bulletin, 1997c).

China's Shuikoushan Mining Authority, Hunan Province,

recently reported that it intended to construct a new primary lead smelter with a production capacity of 80,000 to 100,000 tons per year. Construction is scheduled to begin on the project at the beginning of 1998. The State-owned company recently had expanded lead production capacity at its existing facilities by 15,000 tons per year to a level of 45,000 tons per year (Platt's Metals Week, 1997a).

References Cited

- American Metal Market, 1997, Lead supply hit sharply in rail snafu: American Metal Market, v. 105, no. 202, October 17, p. 12.
- Metal Bulletin, 1997a, Aberfoyle to close Hellyer in 2000: Metal Bulletin, no. 8218, October 9, p. 5.
- 1997b, Lead market remains tight: Metal Bulletin, no. 8221, October 20, p. 23.
- 1997c, Lisheen granted mining lease: Metal Bulletin, no. 8219, October 13, p. 5.
- 1997d, MRSIB to build new secondary lead refinery: Metal Bulletin, no. 8217, October 6, p. 29.
- Mining Journal, 1997, Rosh Pinah deal struck: Mining Journal, v. 329, no. 8449, October 3, p. 274.
- Platt's Metals Week, 1997a, New Pb smelter for China's Shuikoushan: Platt's Metals Week, v. 68, no. 41, October 13, p. 3.
- 1997b, Tsumeb plans February restart: Platt's Metals Week, v. 68, no. 43, October 27, p. 9.
- U.S. Environmental Protection Agency, 1997, Lead; Requirements for lead-based paint activities in public buildings, commercial buildings, and steel structures; Extension of comment period: Federal Register, v. 62, no. 191, October 2, p. 51622.

TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES 1/

(Metric tons)

	1996		1997		
	Year total	Jan. - Oct.	Sept.	Oct.	Jan. - Oct.
Production:					
Mine (recoverable)	426,000	353,000 r/	34,400	35,100	351,000
Primary refinery 2/	326,000	275,000	21,600	30,500	285,000
Secondary refinery:					
Reported by smelters/refineries	1,080,000	821,000	94,400	93,300	877,000
Estimated	--	12,900	1,670	1,640	14,600
Recovered from copper-base scrap e/	16,400	12,500	1,250	1,250	12,500
Total secondary	1,100,000	846,000	97,300	96,200	904,000
Stocks, end of period:					
Primary refineries 2/	XX	XX	5,370	7,310	XX
Secondary smelters and consumers	XX	XX	75,400 r/	76,300	XX
Imports for consumption:					
Ore and concentrates (lead content)	6,570	5,860	--	NA	8,380 3/
Refined metal	268,000	220,000	27,500	NA	196,000 3/
Consumption:					
Reported	1,530,000	1,000,000	105,000	106,000	1,040,000
Undistributed e/	--	371,000	17,000	17,200	170,000
Total	1,530,000	1,380,000	122,000	123,000	1,210,000
Exports (lead content):					
Ore and concentrates	59,700	44,100	5,770	NA	39,200 3/
Materials excluding scrap	102,000	89,000	7,650	NA	69,800 3/
Ash and residues	19,400	15,600	799	NA	13,500 3/
TEL/TML preparations, based on lead compounds	3,200	2,840	297	NA	2,040 3/
Exports (gross weight): Scrap	85,300 4/	71,200 4/	6,920	NA	61,800 3/
Platt's Metals Week North American producer price (cents per pound)	48.83	48.87	46.31	46.19	46.74

e/ Estimated. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Data from American Bureau of Metal Statistics, Inc. (ABMS).

3/ Includes data for January - September only; October data not available at time of publication.

4/ Includes only non-battery scrap data.

TABLE 2
MONTHLY AVERAGE LEAD PRICES

	North American producer price cents/lb	LME		Sterling exchange rate dollars/£
		\$/metric ton	£/metric ton	
1996:				
October	49.04	741.48	467.42	1.586314
Average Jan. - Oct.	48.87	788.19	511.59	1.541315
Year average	48.83	773.87	495.56	1.561616
1997:				
July	46.09	633.91	379.73	1.669382
August	45.84	607.74	379.00	1.603524
September	46.31	633.81	395.81	1.601276
October	46.19	599.80	367.30	1.633009
Average Jan. - Oct.	46.74	639.58	392.25	1.630713

Source: Platt's Metals Week.

TABLE 3
MINE PRODUCTION OF RECOVERABLE LEAD IN THE UNITED STATES 1/

(Metric tons)

	1996		1997		
	Year total	Jan. - Oct. r/	Sept.	Oct.	Jan. - Oct.
Missouri 2/	397,000	326,000	33,200	33,800	338,000
Montana	7,970	6,670	814	789	W
Other States 3/	21,200	19,800	391	499	12,700
Total	426,000	353,000	34,400	35,100	351,000
Daily average 4/	1,160	1,160	1,150	1,130	1,150

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other States."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Alaska and Missouri combined to avoid disclosing company proprietary data.

3/ Includes Colorado, Idaho, Illinois, New York and Tennessee.

4/ Based on number of days in period without adjustment for Sundays or holidays.

TABLE 4
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN OCTOBER 1997 1/

(Metric tons, gross weight)

Item	Stocks Sept. 30, 1997	Net receipts	Consumption	Stocks Oct. 31, 1997
Battery-lead	29,000	93,000	93,800	28,200
Soft lead	W	W	W	W
Drosses and residues	2,300 r/	4,220	4,190	2,330
Other 2/	2,680 r/	3,200	3,280	2,610
Total	34,000	100,000	101,000	33,100
Percent change from preceding month	--	+0.8	+0.5	-2.7

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 5
LEAD, TIN, AND ANTIMONY RECOVERED FROM LEAD-BASE
SCRAP IN OCTOBER 1997 1/

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	53,700	--	--
Remelt lead	W	W	W
Antimonial lead	34,500	13	W
Other 2/	W	W	--
Total lead-base	93,300	38	386

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits.

2/ Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 6
CONSUMPTION OF LEAD IN THE UNITED STATES 1/

(Metric tons, lead content)

Uses	1996		1997		
	Jan.-Dec. 2/	Jan.-Oct.	Sept.	Oct.	Jan.-Oct.
Metal products:					
Ammunition-shot and bullets	52,100	33,700	5,830	4,530	45,300
Brass and bronze-billet and ingots	5,460	5,110	529	510	5,190
Cable covering-power and communication and calking lead-building construction	W	5,450	426	375	4,410
Casting metals	18,800	1,240	488	401	4,400
Pipes, traps, and other extruded products	(3/)	(3/)	(3/)	(3/)	(3/)
Sheet lead	21,200	7,930	1,230	1,170	13,700
Solder	9,020	4,790	509	435	5,610
Storage batteries, including oxides	1,340,000	930,000	95,100 r/	97,700	956,000
Terne metal, type metal, and other metal products 4/	9,560	3,510	172	257	2,030
Total metal products	1,460,000	992,000	104,000	105,000	1,040,000
Other oxides	(5/)	(5/)	(5/)	(5/)	(5/)
Miscellaneous uses	70,900	11,900	408	504	4,910
Total reported	1,530,000	1,000,000	105,000	106,000	1,040,000
Undistributed consumption e/	--	371,000	17,000	17,200	170,000
Grand total	1,530,000	1,380,000	122,000	123,000	1,210,000

e/ Estimated. r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total metal products."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes annual data.

3/ Withheld to avoid disclosing company proprietary data; included with "Sheet lead."

4/ Includes lead consumed in bearing metals, foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

5/ Withheld to avoid disclosing company proprietary data; included with "Miscellaneous uses."

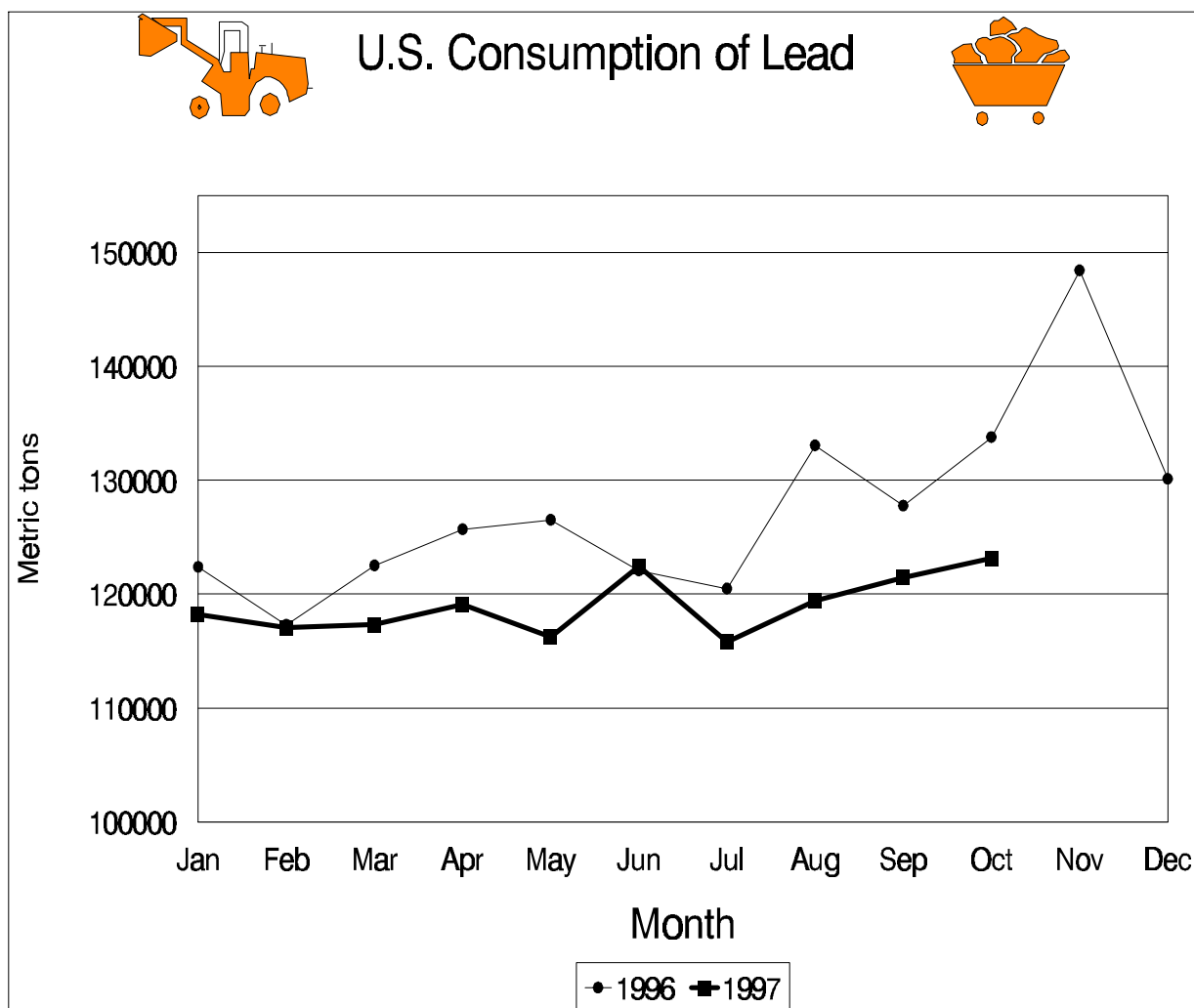


TABLE 7
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND
CONSUMPTION OF LEAD IN OCTOBER 1997 1/

(Metric tons, lead content)

Type of material	Stocks Sept. 30, 1997	Net receipts	Consumption	Stocks Oct. 31, 1997
Soft lead	39,400 r/	56,600	55,400	40,700
Antimonial lead	30,000 r/	31,000	31,700	29,400
Lead alloys	W	18,700	18,400	W
Copper-base scrap	W	433	433	W
Total	75,400 r/	107,000	106,000	76,300

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 8
U.S. EXPORTS OF LEAD, BY CLASS 1/

(Metric tons)

	1996		1997		
	Year total	Sept.	Aug.	Sept.	Jan. - Sept.
Lead content:					
Ore and concentrates	59,700	7,890	14,500	5,770	39,200
Materials excluding scrap	102,000	9,350	4,440	7,650	69,800
Ash and residues	19,400	1,900	553	799	13,500
TEL/TML preparations, based on lead compounds	3,200	795	241	297	2,040
Total	184,000	19,900	19,700	14,500	125,000
Gross weight: Scrap	85,300 2/	7,070 2/	7,070	6,920	61,800

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes only non-battery scrap data.

Source: Bureau of the Census.

TABLE 9
U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN 1/

(Metric tons, lead content)

Country of origin	General imports					Imports for consumption				
	1996		1997			1996		1997		
	Year total	Jan. - Sept.	Aug.	Sept.	Jan. - Sept.	Year total	Jan. - Sept.	Aug.	Sept.	Jan. - Sept.
Ore, matte, etc.:										
Bolivia	326	282	--	230	843	--	--	--	--	--
Canada	352,000	274,000	766	32	59,700	4,370	2,370	--	--	753
Mexico	2,890	1,680	--	--	558	2,080	859	--	--	558
Peru	13,400	11,800	2,030	75	6,900	--	--	598	--	2,410
Other	133	133	--	--	5,120	122	122	--	--	4,660
Total	369,000	288,000	2,800	338	73,100	6,570	3,350	598	--	8,380
Base bullion:										
Mexico	5	--	--	--	5	5	--	--	--	5
Total	5	--	--	--	5	5	--	--	--	5
Pigs and bars:										
Belgium	11	11	--	--	47	11	11	--	--	47
Canada	192,000	131,000	15,500	17,400	140,000	192,000	131,000	15,600	17,700	141,000
Germany	338	147	42	--	359	338	147	42	--	359
Mexico	56,900	41,800	6,770	9,270	49,300	56,900	41,800	6,770	9,270	49,300
Peru	17,100	14,900	500	500	4,700	17,100	14,900	500	500	4,700
United Arab Emirates	160	120	--	10	52	160	120	--	10	52
United Kingdom	19	--	--	--	--	19	--	--	--	--
Other	846	340	10	18	968	846	340	10	18	968
Total	267,000	189,000	22,800	27,200	196,000	268,000	189,000	22,900	27,500	196,000
Reclaimed scrap, including ash and residues	192	171	14	--	62	192	171	14	--	62
Grand total	636,000	476,000	25,600	27,500	269,000	274,000	192,000	23,500	27,500	205,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Revised to zero.

Source: Bureau of the Census.